# ADVANCED REACTOR, FUEL CYCLE, AND ENERGY PRODUCTS WORKSHOP FOR UNIVERSITIES

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AFC R&D

Systems Analysis

LLNL

Workshop for Universities Hilton Hotel, Gaithersburg, MD March 20, 2007



#### Systems Analysis - Area Overall Work Scope

- Develop and apply evaluation tools to formulate, assess, and guide program activities to meet programmatic goals and objectives
- Integrates information from the diverse technology development and R&D efforts, as well as drivers such as policy and law
- Enables examination of a diverse set of scenarios
  - Evaluate off-ramps
  - Evaluate technology alternatives
  - Examine deployment options
  - Understand dynamics
- Used to define the requirements for the development and demonstration of the technologies that are necessary to meet a mission

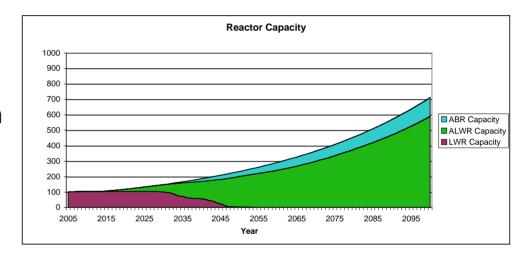
# FY06 ACCOMPLISHMENTS

- 2006 Comparison Report to Congress
- Report documenting the recommendation on the thermal recycle option
- Second draft of the Technical Options Report (input to Secretarial recommendation on the need for a second repository)
- Alternatives Study
- Cost Basis Report
- Release of VISION (dynamic simulation model) update

U.S. Department of Energy Office of Nuclear Energy Advanced Fuel Cycle Initiative (AFCI) Comparison Report, FY 2006 Update May 2006

#### **WORK IN PROGRESS FOR FY07**

- Systems Status Report to Congress
- GNEP Scenario Studies
  - Deployment System
  - First Facilities
- Externally releasable version of Cost Basis Report
- 2007 Comparison Report
- Update to Technical Options Report
- Externally releasable version of Cost Basis Report
- Integrated Waste
  Management Strategy
- Transportation Studies
- VISION update



### PLANS FOR FY08-09

- Input to June 2008 Decision Package
- Scenario Studies
  - Coordination and timing of facilities
  - Requirements for separations efficiencies
  - Repository/waste form requirements
  - Transportation infrastructure needs
  - Industry infrastructure needs
  - Economics
- Global benefits study
- Integrated Waste Management Strategy
- Support development of GNEP business case